Amendments to the Specification:

*Please amend paragraph [0013] as follows:

[0013] Digital watermarking, a form of steganography, is the science of encoding physical and electronic objects with plural-bit digital data, in such a manner that the data is essentially hidden from human perception, yet can be recovered by computer analysis. In physical objects, the data may be encoded in the form of surface texturing, or printing. Such marking can be detected from optical scan data, e.g., from a scanner, optical reader, input device, digital camera, or web cam. In electronic objects (e.g., digital audio or imagery – including video), the data may be encoded as slight variations in sample values. Or, if the object is represented in a so-called orthogonal domain (also termed "non-perceptual," e.g., MPEG, DCT, wavelet, etc.), the data may be encoded as slight variations in quantization values or levels. The assignee's U.S. Patent No. 6,122,403 and U.S. Application No. 09/503,881 (now U.S. Patent No. 6,614,914) are illustrative of certain watermarking technologies.

*Please amend paragraph [0017] as follows:

[0017] In one example, subliminal graticule data can be sensed to identify the locations within the image data where the binary data is encoded. The nominal luminance of each patch before encoding (e.g., background shading on a map) ~~map)~~ is slightly increased or decreased to encode a binary "1" or "0." The change is slight enough to be generally imperceptible to human observers, yet statistically detectable from the image data. Preferably, the degree of change is adapted to the character of the underlying image, with relatively greater changes being made in regions where the human eye is less likely to notice them. Each area thus encoded can convey plural bits of data (e.g., 16 – 256 bits).

*Please amend paragraph [0019] as follows:

[0019] The assignee's U.S. Application Nos. 09/503,881 (now U.S. Patent No. 6,614,914) ~~09/503,881and~~ 09/452,023 (now U.S. Patent No. 6,408,082) detail certain reference signals, and processing methods, that permit such watermark decoding even in the presence of distortion. In some image watermarking embodiments, the reference signal comprises a constellation of quasi-impulse functions in the Fourier magnitude domain, each with pseudorandom phase. To detect and quantify the distortion, the watermark decoder converts the watermarked image to the Fourier magnitude domain and then performs a log polar resampling of the Fourier magnitude image. A generalized matched filter correlates the known orientation signal with the re-sampled watermarked signal to find the rotation and scale parameters providing the highest correlation. The watermark decoder performs additional correlation operations between the phase information of the known orientation signal and the watermarked signal to determine translation parameters, which identify the origin of the watermark message signal. Having determined the rotation, scale and translation of the watermark signal, the reader then adjusts the image data to compensate for this distortion, and extracts the watermark message signal as described above.

*Please amend paragraph [0050] as follows:

[0050] Street (or road) signs may also be digitally watermarked as discussed above with respect to objects. Consider the implications of such. An automobile is equipped with a [[~~an~~]] watermark decoder (e.g., an input device such as an optical reader, digital camera, laser reader, etc. and watermark detecting and decoding software). In one embodiment, the input device is configured with magnification enhancements, such as a zoom lens, signal amplifier, etc., to allow capture of road sign images from a far. The captured images (or corresponding signals) are input for analysis by the decoding software. The watermark payload is used to convey related information.